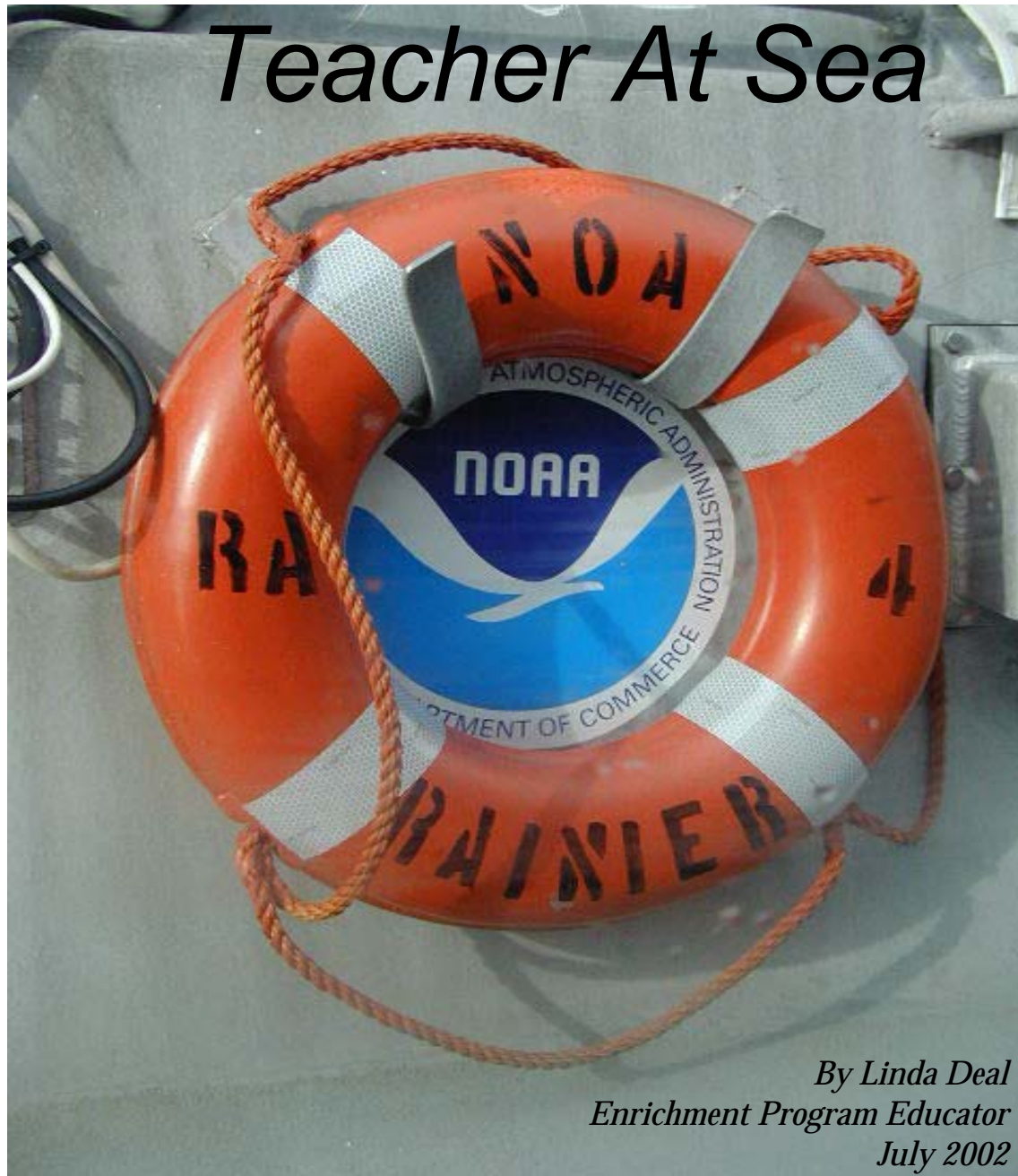


Teacher At Sea



*By Linda Deal
Enrichment Program Educator
July 2002*

A teacher named Linda went to sea
With a crew on the ship of about forty three.

The ship was one of the great NOAA fleet
Being on the Rainier would be a great treat.



As a hydrographic ship, the Rainier stands tall.
Her mission to measure ocean floor rise and fall.

Eight working launches make her detail complete
And they run to gather data assigned on each sheet.

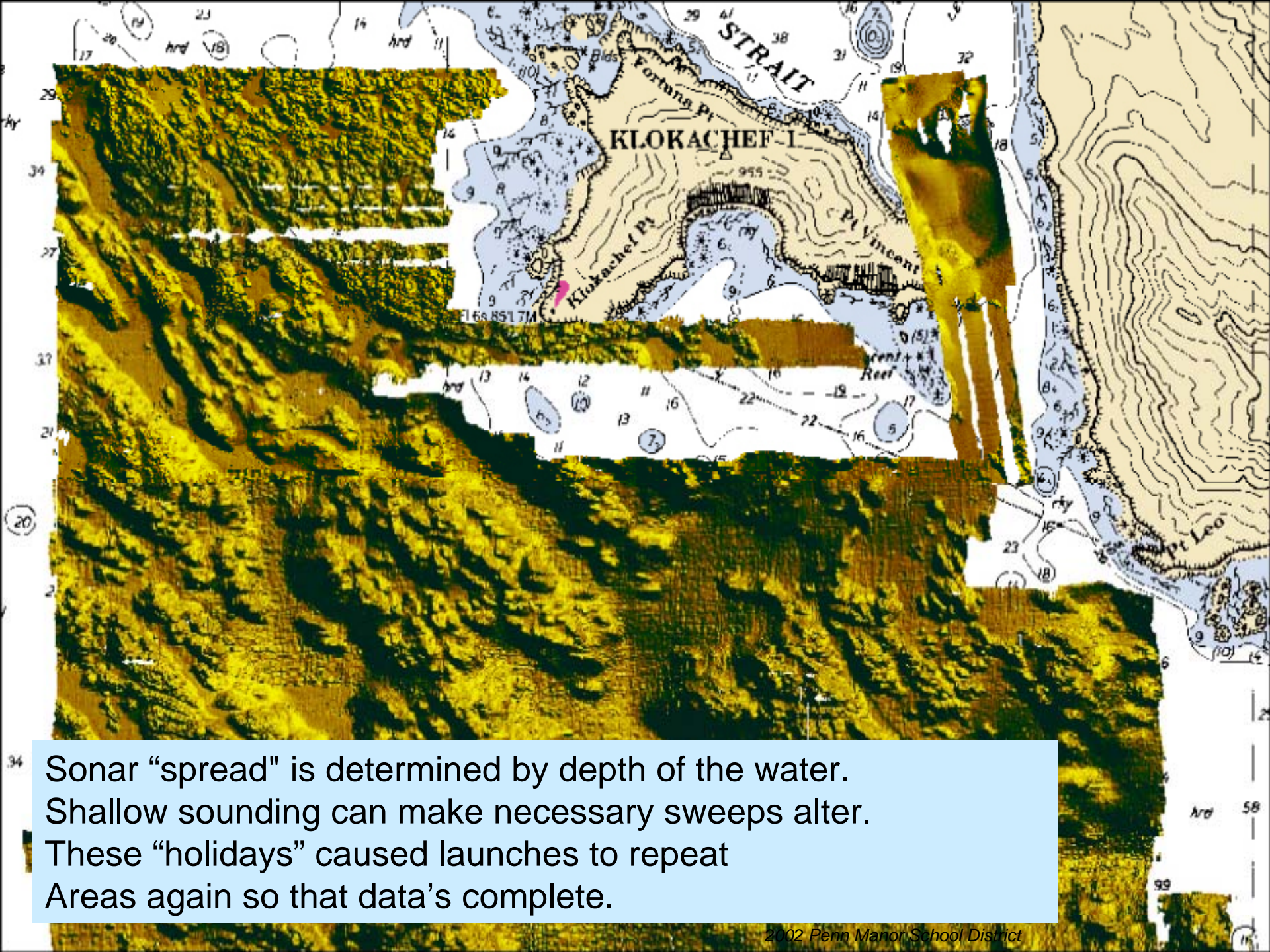


This [teacher](#) learned how they use [Doppler](#) sound...



To spread multi-beam sound waves along [ocean ground](#).





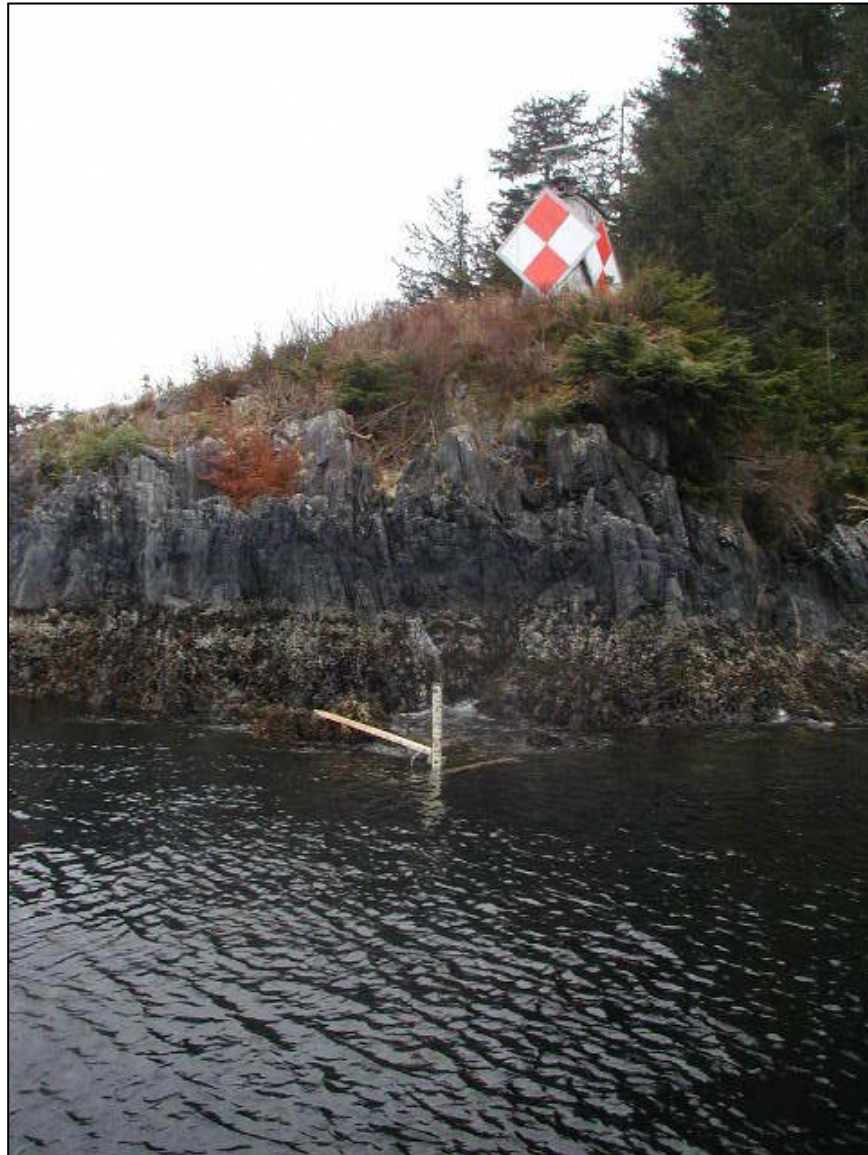
Sonar "spread" is determined by depth of the water. Shallow sounding can make necessary sweeps alter. These "holidays" caused launches to repeat Areas again so that data's complete.

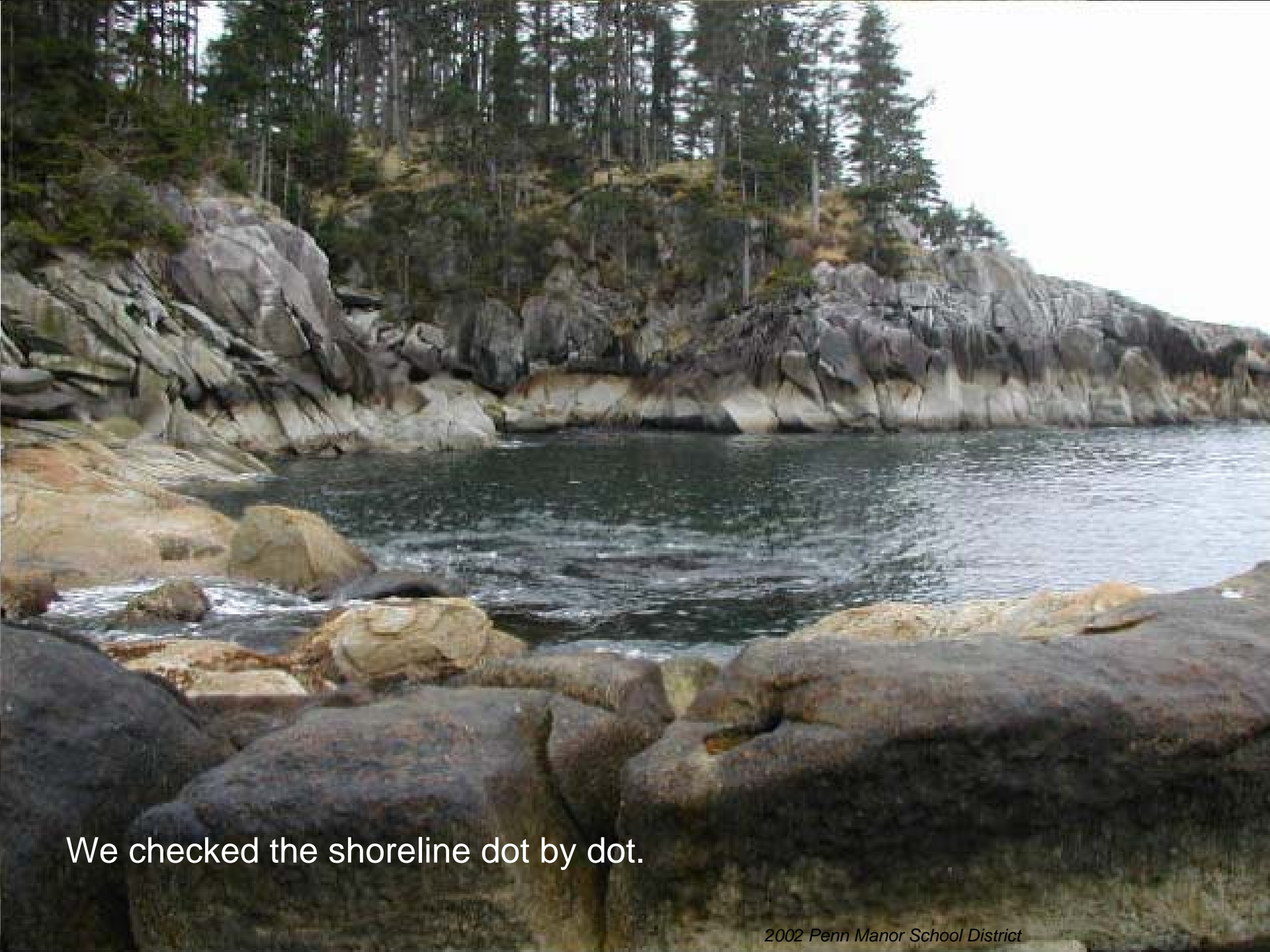
Computers adjust for water temperature, [salinity](#) and [depth](#)
All these factors change sound waves effect.

This must be considered with data's final toll
Along with the launch's pitch, heave and roll.



Bottom depth is just one part of the data they know
They measure the current strength, tide ebb and flo.



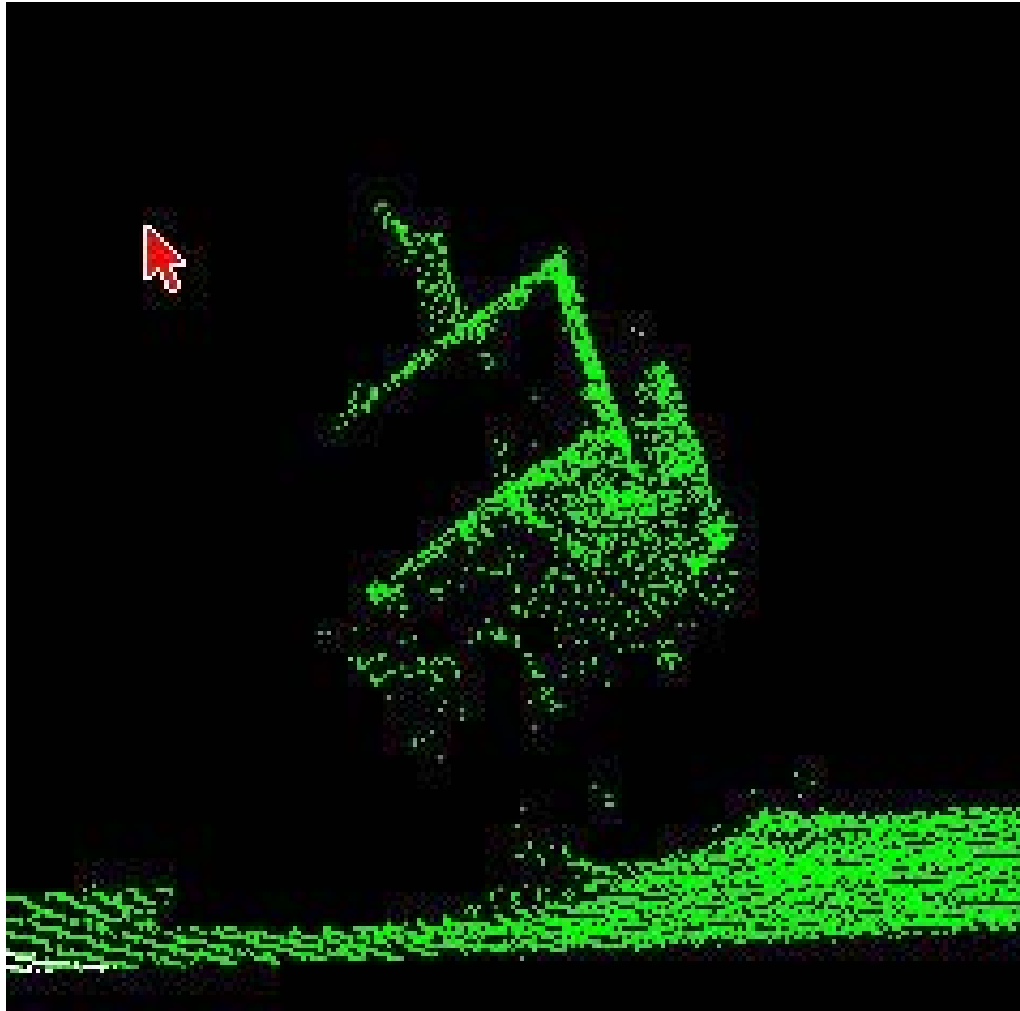


We checked the shoreline dot by dot.

And hit the rocks so others would not.



The data collected produces our charts
of wrecks, rocks, pinnacles and underwater parts.



The charts they make are for public domain
Never for profit are charts sold for gain.

These noble people endanger their lives
So we can sail safely and go on some dives.



Computers are necessary tools of their trade
But they monitor the accuracy of measurements made

By taking the time to spot check by hand
The agreement of data produced on the land.



The Rainier uses fuel to help with her ballast
Shifting gallons of oil port to starboard for balance.

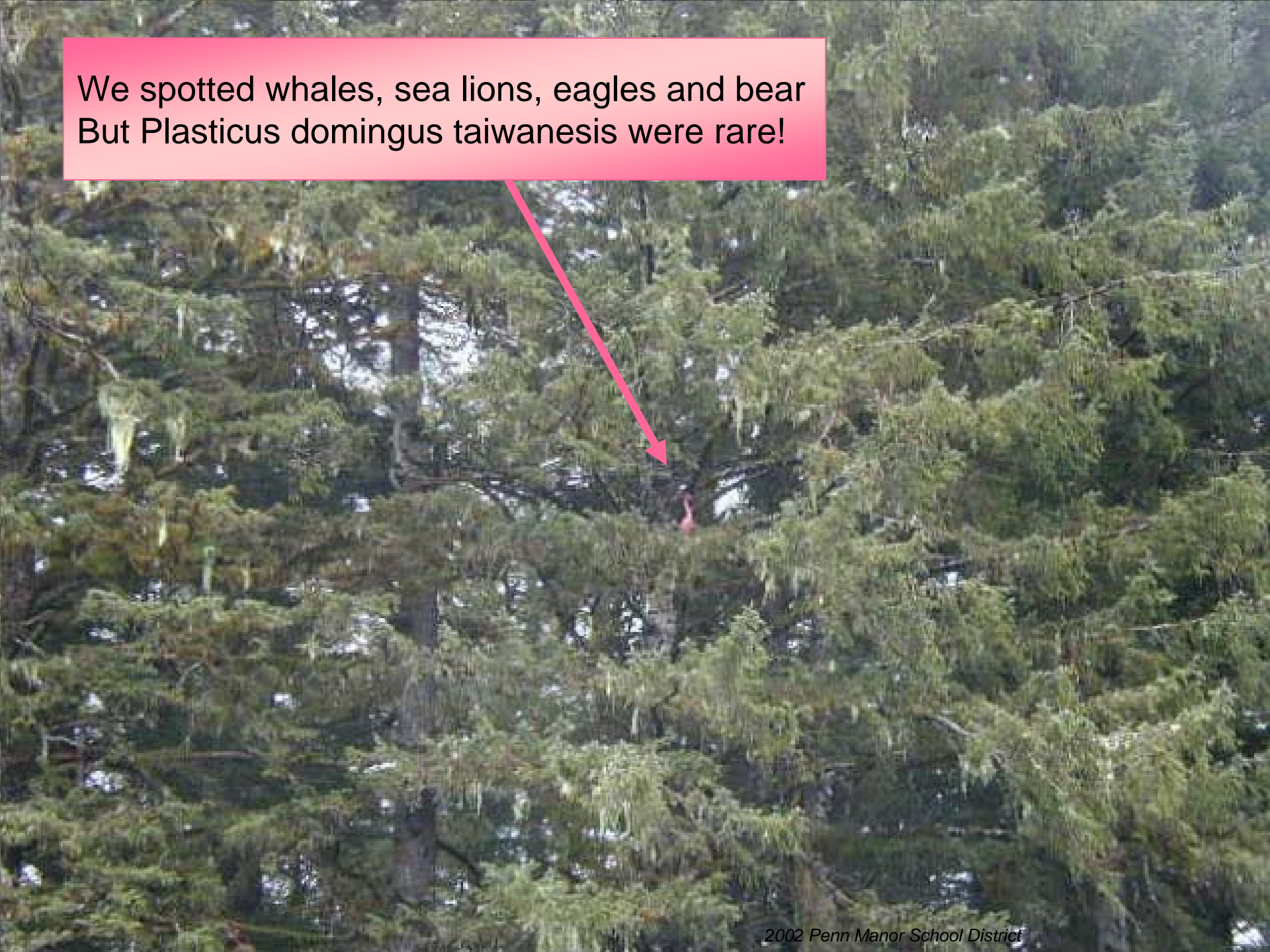
As the launchers are lowered down into the sea
Her keel is kept even, not tipping to lee.



There are different ways to measure water depth
Drop a lead line, sonar sounding or divers with breath.

To go to the bottom and check out a shadow
It is wreck, rock or error lying there fallow?

We spotted whales, sea lions, eagles and bear
But *Plasticus domingus taiwanesis* were rare!



When the ship leaves port, their families they miss
Spouses and children they rarely can kiss.

Two or three months of the year must suffice
They and their families both make sacrifice.



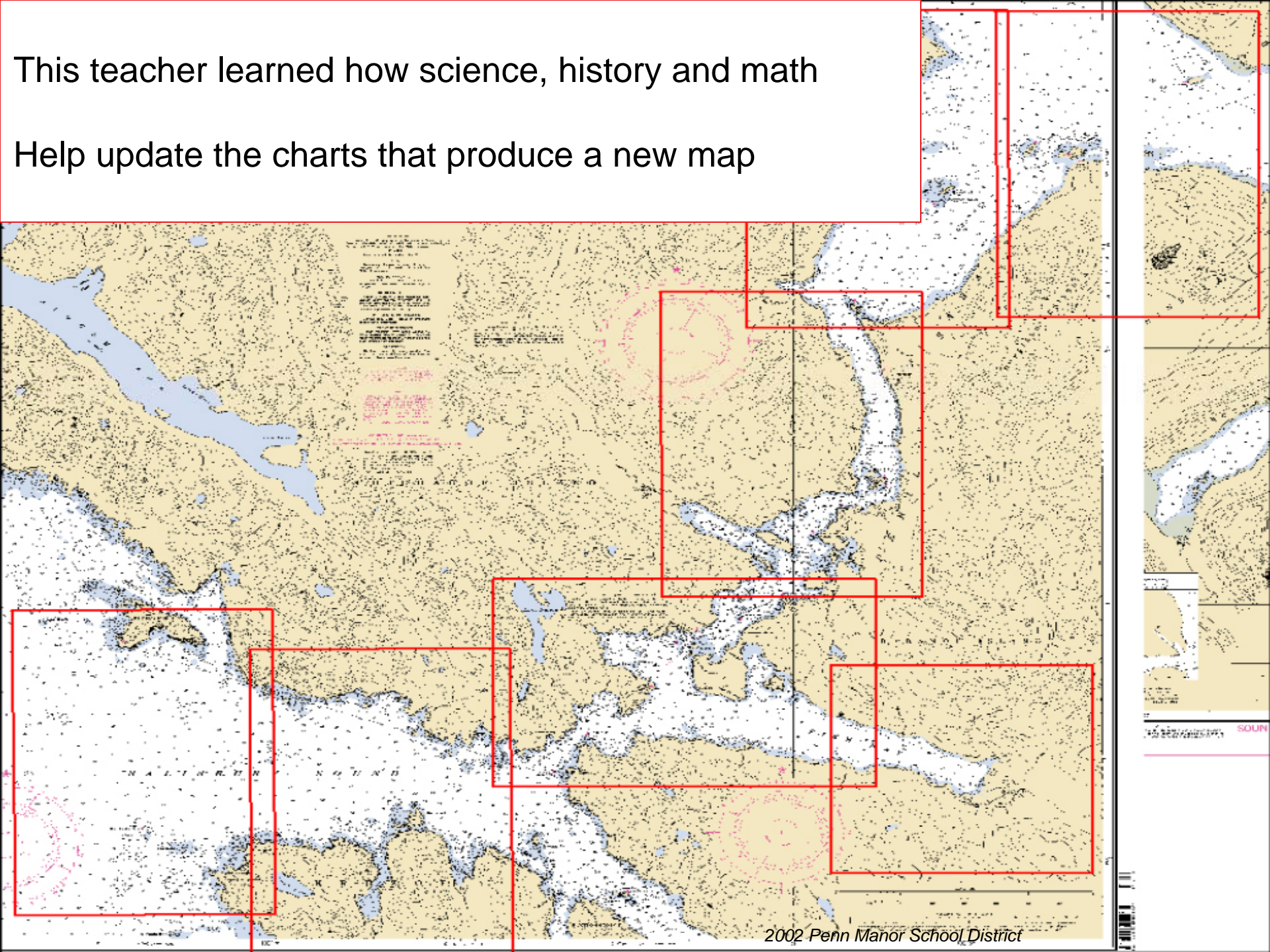
All is not hardship, however at sea
The food is delicious, attractive and key.

To the social interaction that happens on board
Vegetarian meals, desserts abounded as we toured.



This teacher learned how science, history and math

Help update the charts that produce a new map



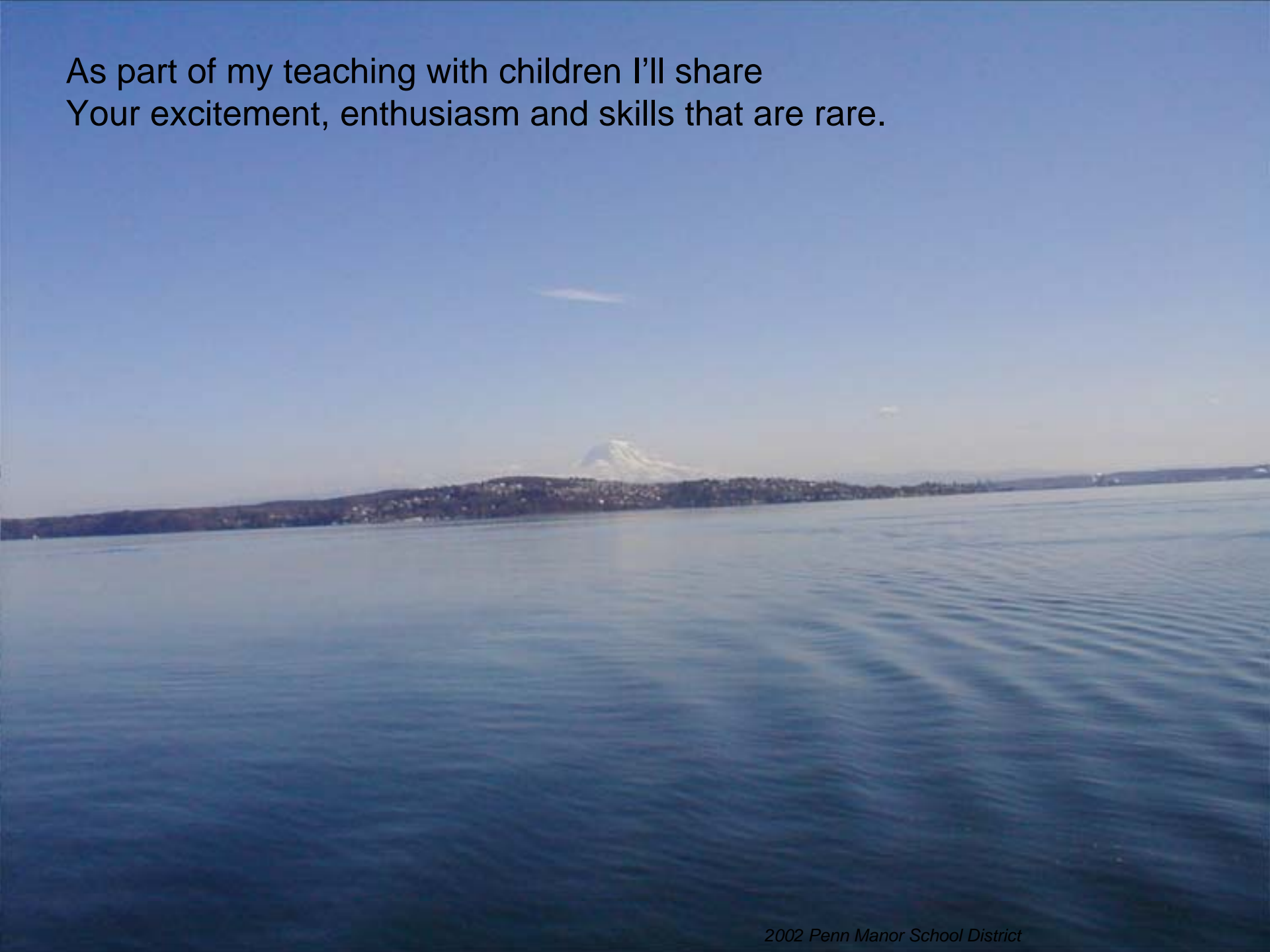


I want to thank each person on crew
I admire your dedication to the work that you do.

I know I can't mention each one in this rhyme
But memories of you all will remain in time.



As part of my teaching with children I'll share
Your excitement, enthusiasm and skills that are rare.



Credits

Penn Manor School District

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Mrs. Linda Deal

Enrichment Teacher

National Oceanic and Atmospheric Administration

Crew aboard the *RAINIER*